

Applicant : Shackleford et al.
Patent No. : n/a
Issued : n/a
Serial No. : 09/977,978
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Attorney's Docket No.: 10019023-1

REMARKS

The Applicants wish to express their gratitude to the Examiner for his time and helpfulness during the telephone conference of March 25, 3:00 P.M. E.S.T. Remarks to issues raised in the Office Action mailed February 10, 2005 will be addressed below following their order of occurrence.

Information Disclosure Statement: The Examiner pointed out papers by Wolfram and Hortensius et al. were cited but not submitted using an Information Disclosure Statement. The Applicants have had difficulty obtaining these references in a timely manner and therefore will be submitting them shortly with an Information Disclosure Statement under a separate transmittal. However, the Information Disclosure Statement included in the present response herein only lists the Sipper and Walker reference as the Examiner indicated a difficulty in readily obtaining these references during the initial examination.

Specification: The Examiner objected to incomplete references to related co-pending applications and to references to attorney docket numbers. The Applicants have modified the Specification to reflect current application serial numbers and have removed references to attorney docket numbers.

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Claims: The Examiner rejected claims 1–29. Specifically, claims 18 –29 were rejected under 35 U.S.C § 112, second paragraph, as being incomplete for omitting essential elements. Applicant has amended claim 18 to include a “computer system for generating software code to emulate a cellular automata” using one or more different modules. Further, dependant claims 19-29 depend from claim 18 and also include a “computer system” for implementing aspects of the present invention. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 18-29 under 35 U.S.C § 112, second paragraph.

Claims 1–17 were rejected under 35 U.S.C § 101 as reciting a process that is not directed to the technological arts. Applicant has amended claim 1 to indicate it is a “computer-implemented method” thus ensuring it is directed to the technological arts. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1-17 under 35 U.S.C § 101.

Claims 18–29 were rejected under 35 U.S.C § 101 as reciting a machine that appears to be implemented in software alone. Applicant has amended claim 18 to include a “computer system for generating software code to emulate a cellular automata” using one or more different modules. Further, dependant claims 19-29 depend from claim 18 and also include a “computer system” for implementing aspects of the present invention. The computer system clearly includes

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the necessary hardware to operate the modules as claimed. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 18-29 under 35 U.S.C § 101.

Claims 1–6 were rejected under 35 U.S.C § 102(b) as being anticipated by Sipper et al., “Generating Parallel Random Number Generators by Cellular Programming,” Journal of Modern Physics C, Vol. 7, No. 2, pp. 181–190 (1996). Sipper describes finding and evaluating computer automata random number generators (CA-RNG) (pg. 6, paragraph 2-3 and pg. 8, paragraph 2 of Sipper). The Applicants respectfully point out that the reference to Walker cited in Sipper does not refer to “simulation performed using public domain software” as the Examiner assumed, but instead refers to a statistical analysis program that reads a file of numbers and then reports on various statistical properties of the numbers in the file. For example, the Walker reference title indicates that it is a “Pseudorandom Number Sequence Test Program” and not a simulator program. In particular, it provides a Chi square distribution for the numbers in the file indicating the randomness of the numbers (pg. 1, paragraph 5 of Walker). Because the Examiner was unable to obtain a copy of Walker during the initial examination, the Applicant has included a copy for the Examiner's convenience the IDS filed herewith.

Indeed, neither Walker nor Sipper teaches or suggests a “software emulation of cellular automata” that operates by “storing state values from odd-numbered cells in a first software

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variable and state values from even-numbered cells in a second software variable wherein word operations on the first and second variables enables the simulation of the cells to occur in parallel during execution" and "outputting result of said simulation step a random number having the state values stored in the first software variable and in the second software variable" as recited in amended claim 1. Accordingly, claim 1 is in condition for allowance in view of Sipper and/or Walker. While dependant claims 2-6 are allowable on their own, they are also in condition for allowance based upon their dependency of claim 1 as well.

Claims 1-29 are now in condition for allowance. As amended, claims 1-6 are neither taught nor suggested by Sipper and/or Walker. Further, Applicants have rewritten claims 7-29 and request withdrawal of the rejections under 35 U.S.C § {101, 112 second paragraph} as they are now in condition for allowance as the Examiner had previously suggested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Leland Wiesner, Applicants' Attorney at (650) 853-1113 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

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Respectfully Submitted,

05/10/2005

Date

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